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Effect of Financial Literacy on the Performance of Small and Medium Enterprises in Abuja FCT

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ABSTRACT

This study examines the effect of financial literacy, measured through financial knowledge, financial attitude and financial behaviour, on SME performance in the Federal Capital Territory (FCT). A cross-sectional survey design was adopted using primary data collected in 2025. The sampling frame was the 38,003 FCT SMEs registered with the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN, 2021 survey report). A sample of 396 was determined using Yamane's (1967) formula at a 5% margin of error, and respondents were selected by simple random sampling from this frame. Data were collected from SME owners and managers using a self-administered, structured questionnaire of 20 items on a five-point Likert scale (five each for financial knowledge, attitude, behaviour and SME performance), adapted from Bamidele et al. (2024) and Okafor et al. (2024). Of 396 questionnaires distributed, 357 were returned, a response rate of 90.15%. Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) in SmartPLS 3, and the measurement model showed satisfactory reliability and validity. The three predictors jointly explained 65% of the variance in SME performance ($R^2 = 0.65$; adjusted $R^2 = 0.64$), and the blindfolding result ($Q^2 = 0.52$) indicated strong predictive relevance. Financial knowledge had a positive but statistically insignificant effect ($\beta = 0.127$, $t = 1.582$, $p = 0.114$). Financial behaviour had a positive and significant effect ($\beta = 0.345$, $t = 3.721$, $p < 0.001$). Financial attitude had a negative and significant effect ($\beta = -0.278$, $t = -2.967$, $p = 0.003$), a counter-intuitive result discussed in light of possible overconfidence and excessive risk-taking. The findings suggest that how owners apply financial knowledge matters more than the knowledge itself. The study recommends practical workshops, mentorship and behaviour-focused financial management support for SMEs in Abuja FCT.

KEYWORDS: Financial literacy • Financial knowledge • Financial attitude • Financial behavior • SME performance

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Introduction

Small and Medium Enterprises (SMEs) make up roughly 90% of businesses worldwide and provide over half of all employment (World Bank, 2022), yet their growth and survival are constrained by many challenges, with financial management among the most serious. Financial literacy is therefore widely seen as a key influence on SME performance, as owners with stronger financial knowledge, more favourable attitudes and sounder financial behaviour tend to make better decisions on investment, credit and the use of resources (OECD, 2020). Lusardi and Mitchell (2014) showed that financial literacy improves individuals' financial decisions, including saving and retirement planning, and later studies of business owners in Europe and Asia have linked financial capability to easier access to finance, greater resilience and higher profitability (European Commission, 2021; Kumar et al., 2019). The issue is especially pressing in Africa, where SMEs supply about 80% of employment and 20% of GDP (African Development Bank, 2023) but often struggle with limited access to finance and weak resource management. In Nigeria, poor financial management is widely associated with the early collapse of small firms (Olaoye & Olaoye, 2021), and Abuja, as the Federal Capital Territory and an administrative and commercial hub, offers openings for service-oriented businesses while exposing SMEs to rising operating costs, stiff competition and shifting regulation.

Although the knowledge, attitude and behaviour framework is well established, much of the existing evidence treats these dimensions as one bundle and assumes that simply having financial literacy improves business outcomes. This study tests that assumption by examining the effects of financial knowledge, financial attitude and financial behaviour separately on SME performance in Abuja FCT. Its contribution is to show that applying financial literacy, rather than merely possessing it, is what matters for performance: financial behaviour has a significant positive effect, financial knowledge alone does not, and financial attitude is negatively related to performance. These results shift the policy question from how to raise owners' financial knowledge to how to help them put it into practice, and they offer guidance to policymakers, entrepreneurs, financial institutions and business-support organisations designing entrepreneurship education, mentorship and financing programmes.

Statement of the Problem

The performance of Small and Medium Enterprises (SMEs) remains a critical concern for policymakers, researchers and practitioners globally. In Nigeria, particularly Abuja FCT, SMEs face significant challenges that constrain their growth, sustainability and contribution to economic development (Olawale & Garwe, 2020). Studies indicate that about 80% of Nigerian SMEs fail within their first five years, with financial management challenges identified as a major contributing factor (Olaoye & Olaoye, 2021). In Abuja FCT, Ibrahim and Mohammed (2023) reported that 65% of surveyed SMEs experienced difficulties with financial decision-making, cash flow management, and access to financing, despite various government interventions and support programmes aimed at strengthening the SME sector.

Although studies have examined financial literacy and SME performance in settings such as Bauchi Metropolis (Olalekan, 2024), Kigali City (Mudumizi & Claude, 2024), Ghana's Central Region (Frimpong et al., 2024), and Malaysia (Yakob et al., 2021), empirical evidence specifically focusing on Abuja FCT remains limited. Abuja offers a distinctive context as Nigeria's administrative and commercial hub, where SMEs operate under specific regulatory, financial, and infrastructural conditions. This study therefore addresses this gap by examining the effect of financial literacy on SME performance in Abuja FCT, with specific emphasis on three dimensions of financial literacy: financial knowledge, financial attitude and financial behaviour.

Objectives of the Study

The main objective of the study is to examine the effect of financial literacy on the performance of small and medium enterprises in Abuja FCT. The specific objectives of the study are to:

Determine the effect of financial knowledge on the performance of small and medium enterprises in Abuja FCT, Nigeria

Investigate the effect of financial attitude on the performance of small and medium enterprises in Abuja FCT, Nigeria

Ascertain the effect of financial behavior on the performance of small and medium enterprises in Abuja FCT, Nigeria

Literature Review

Financial Literacy

Financial literacy means the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction, and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities to make informed choices, to know where to go for help and to take other effective actions to improve their financial well-being (Mitchell, 2017). Financial literacy is the ability to understand financial matters, consisting of the skills and knowledge that allow an individual to make informed and effective decisions through an understanding of finances (Kings, 2017). It is associated with the attitudes relevant to financial decision-making, behavior and knowledge. These decisions include when to save, when to spend, managing a budget, choosing the right financial products and willingness to address other events, such as financing children's education and planning for retirement. The higher the financial literacy, the higher the benefit for people because it helps them make better financial decisions and gives them more control over their money (Ibrahim, 2018). Consequently, it improves economic performance. However, Mak and Braspenning (2012) argue that entrepreneurs generally lack sufficient financial literacy to make informed, rational decisions, concluding that behavioral biases distort consumer decision-making. Financial behaviour skills enable individuals to navigate the financial world, make informed decisions about their money and minimize their chances of being misled on financial matters (Armitage & Conner, 2001).

As a working definition, this study adopts the definition of Mitchell (2017) that Financial literacy means the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction, and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities to make informed choices, to know where to go for help and to take other effective actions to improve their financial well-being.

Financial Knowledge

According to Lusardi and Mitchell (2014), financial knowledge refers to the ability to process economic information and make informed decisions about financial planning, wealth accumulation, debt, and pensions. This definition emphasizes the cognitive abilities involved in processing financial information and applying it across various financial domains. Furthermore, the researchers argue that financial knowledge is a form of human capital investment, enabling individuals to earn returns through better financial decision-making, which ultimately improves financial well-being. Similarly, Van Rooij et al. (2011) define financial knowledge as familiarity with and understanding of financial concepts, products, and risks, which enables individuals to make informed choices, avoid financial pitfalls, and take effective actions to improve their financial well-being. Their research highlights the direct influence of financial knowledge on decision-making related to complex financial products and investments, with significant implications for long-term wealth accumulation.

Financial attitude

Aydin and Selcuk (2019) define financial attitude as a psychological tendency expressed through favorable or unfavorable evaluations of financial management practices that influence financial planning decisions and financial well-being. This evaluative definition emphasizes how financial attitudes involve

subjective assessments of financial behaviors that ultimately shape financial outcomes and satisfaction. According to Sansone et al. (2019), financial attitude represents a psychological orientation toward saving, spending, and financial management that influences financial knowledge acquisition and application. This orientation-focused definition highlights how attitudes affect engagement with financial information, suggesting that they determine not only financial behaviors but also receptivity to financial education.

Financial Behavior

Financial behavior refers to how individuals manage, allocate, spend, save, and invest monetary resources. According to Xiao (2008), financial behavior encompasses all human behavior that is relevant to money management, including cash management, credit management, financial planning, investments, insurance, and retirement planning. Financial behavior also involves the psychological mechanisms and decision-making processes that underlie these activities. Additionally, this behavior accumulates over time to significantly impact overall financial wellbeing despite the seemingly minor nature of individual actions. Consumer financial behavior, as defined by Schuchardt et al. (2007), encompasses how individuals acquire, allocate, and use financial resources over time while accounting for financial constraints, opportunities, and marketplace influences. Moreover, this behavior is shaped by a complex interplay of internal psychological factors and external environmental conditions.

Empirical Review

Financial Knowledge and Performance

Bamidele et al. (2024) examined the effect of financial knowledge on the performance of small and medium-scale enterprises in Zamfara State, Nigeria. The study was guided by human capital theory. A descriptive-correlational method of analysis was employed in this study. A sample of 250 SMEs was used from the total population of 1236 registered SMEs in Zamfara State, Nigeria. The study used an inferential statistical tool, such as regression analysis, to test the relationship between the variables. The study found that financial knowledge has a positive coefficient value of 0.916 with a t-statistic value of 5.674 at a p-value of 0.000. One criticism of the study is the disparity in analytical methods, as the present research employs PLS-SEM rather than another approach.

Mudumizi and Claude (2024) assessed the impact of financial literacy on the financial performance of Small and Medium Enterprises (SMEs) in Nyarugenge District, Kigali City. Financial literacy, encompassing financial planning, record-keeping, and knowledge of financial access, was investigated to understand its influence on SME performance. Using a correlational design and quantitative methods, the study involved 211 SME proprietors across trade, manufacturing, and service sectors in Nyarugenge District. The research utilized a questionnaire as the primary data collection tool, ensuring a 100% response rate. Purposive and convenience sampling techniques were employed for participant selection. Findings showed a significant relationship between financial planning skills and the financial performance of SMEs in Nyarugenge District, suggesting that strong financial planning positively affects financial outcomes. Similarly, effective record-keeping skills were linked to improved financial performance among surveyed SMEs. Additionally, knowledge of financial access significantly affected SMEs' financial performance, indicating that understanding funding sources contributes to better financial outcomes. Although this study is comprehensive, it differs in terms of the target population.

Financial Attitude and Performance

Bamidele et al. (2024) examined the effect of financial literacy on the financial performance of small and medium-scale enterprises in Zamfara State, Nigeria. The study specifically examined the impact of financial knowledge, financial behaviour, and financial attitude on SMEs' financial performance. The study was guided by human capital theory. A descriptive-correlational method of analysis was employed in this study. A sample of 250 SMEs was used from the total population of 1236 registered SMEs in Zamfara State, Nigeria. The study used an inferential statistical tool, such as regression analysis, to test the

relationship between the variables. The study found that financial knowledge has a positive coefficient value of 0.916 with a t-statistic value of 5.674 at a p-value of 0.000. The null hypotheses were rejected based on the results of the analysis. The study established a positive and significant relationship between financial literacy and the financial performance of SMEs. One criticism of the study relates to the disparity in analytical methods, as the present research employs PLS-SEM as opposed to another approach.

Financial Behavior and Performance

Culebro-Martínez et al. (2024) examined whether companies' performance is significantly related to micro, small, and medium-sized entrepreneurs' financial knowledge, financial behavior, and financial attitude. The study also analyzed the effects of the variables age, size, and sector of the companies, as well as the entrepreneur's age, gender, and educational level, on companies' performance. In the State of Veracruz, Mexico, there were 278,230 companies distributed across its 212 municipalities. Data from 206 entrepreneurs from Veracruz, Mexico, were analyzed using a logistic regression model. The results show that the financial behavior of the entrepreneurs has a positive and highly significant effect on companies' performance, although the entrepreneurs' knowledge and attitude do not have a significant relationship with companies' performance. The results also show that companies in the industrial sector led by men are less likely to achieve high performance than those in the commerce sector. No effect was found for the variables age, company size, and the entrepreneur's educational level on company performance. Although this study is comprehensive, it differs in its target population.

Habib (2024) examined the effect of financial literacy on performance in Dessie city administration, Ethiopia and specifically focused on examining the main determinant factors of financial literacy and the level of financial literacy of small-scale workers. The total number of workers currently registered in the small-scale enterprise office was 897. The researcher used Yamane's (1967) formula to determine the appropriate sample size of 277. Stratified random sampling was employed. Primary data were collected using a questionnaire in both open and closed-ended forms. Secondary data were obtained from main office records, published financial literacy reports on saving behavior, and other available documents and online journals. Both explanatory and descriptive research designs were engaged. Data analysis was conducted using SPSS to obtain both inferential and descriptive statistics. The results were presented using regression, tables, graphs, and charts. The findings of the study show that the most influential determinants of financial literacy are socio-demographic factors such as Education, Age, income, and employment status. The study concluded that financial literacy has a positive and significant effect on performance in Dessie City Administration. Although this study is comprehensive, it differs in terms of the target population.

Theoretical Framework

Behavioral Finance Theory

Behavioral Finance Theory emerged in the 1970s and 1980s as a challenge to traditional finance theories that assumed rational economic decision-making. Its foundations were established by Daniel Kahneman and Amos Tversky through Prospect Theory, which demonstrated that individuals' decisions under risk and uncertainty often deviate systematically from rational economic models. Richard Thaler further developed these ideas within financial contexts, while subsequent contributions by scholars such as Robert Shiller and Hersh Shefrin strengthened the theory's empirical and theoretical foundations. Behavioral Finance Theory posits that financial and economic decisions are influenced not only by rational calculations but also by psychological and cognitive factors, including biases, emotions, and cognitive limitations. Unlike traditional theories such as the Efficient Market Hypothesis, it recognizes that human behaviour can contribute to deviations from rational decision-making and market efficiency.

This study adopts Behavioral Finance Theory as its theoretical framework for examining the effect of financial literacy on SME performance in Abuja FCT. The theory is particularly relevant because it explains how psychological and cognitive factors influence financial decision-making among SME owners.

By conceptualizing financial literacy through financial knowledge (FK), financial attitude (FA), and financial behavior (FB), the study captures both the cognitive and psychological dimensions of financial management. The theory also helps explain why SME owners with similar levels of financial knowledge may exhibit different financial behaviours and achieve different performance outcomes due to differences in attitudes, biases, and decision-making patterns. Thus, Behavioral Finance Theory provides a suitable framework for understanding the relationship between financial literacy and SME performance in the Abuja FCT context.

Methodology

The study employs a survey research design, in which data are collected and analyzed from a subset of individuals or items considered representative of the entire population. This design is chosen because it is suitable for examining the effect of financial literacy on SME performance over a specific period. The study population consists of small and medium enterprises (SMEs) in the Federal Capital Territory (FCT) that are registered with the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN). According to SMEDAN's 2021 survey report, there are 38,003 registered SMEs in this region. The SMEDAN database was chosen because it serves as the primary government agency responsible for addressing development issues related to SMEs in the country. Abuja was selected as the study location because it is Nigeria's capital city and attracts a diverse population from various backgrounds and professions. The sample size for this study will be determined using the formula proposed by Taro Yamane (1967), based on the assumption that the sample is representative of the population. The study's sample size is 396. A simple random sampling technique was used due to its methodological advantages and statistical reliability. This approach ensures that each SME in the population has an equal and independent chance of being selected, minimizing potential selection bias that could impact the study's findings. This study utilized primary data to examine the effect of financial literacy, comprising Financial Knowledge, Financial Attitude, and Financial Behavior, on the performance of small and medium enterprises (SMEs) in Abuja, FCT. A structured questionnaire, designed on a five-point Likert scale ranging from strongly agree (5) to strongly disagree (1), was self-administered to collect data from SME managers and owners, who serve as the study's respondents. The Likert scale was chosen because its interval nature allows the use of parametric tools to analyze questionnaire responses. The questionnaire used in this study is adopted from various sources to align with the research objectives. Specifically, a questionnaire developed by Bamidele et al. (2024) is adopted to measure Financial Knowledge (FK), Financial Attitude (FA), and SME Performance (SP), each with five items. Additionally, a questionnaire developed by Okafor et al. (2024) is adopted to measure Financial Behavior (FB), also with five items. All items are presented on a five-point Likert scale, ranging from strongly agree (5) to strongly disagree (1).

Model Specification

The study utilized Partial Least Squares–Structural Equation Modeling (PLS-SEM) to assess the impact of each independent variable on the dependent variable. Data analysis will be conducted using SmartPLS software, which is widely recognized as a reliable and commonly used tool for implementing the PLS-SEM method.

The model of this study is design as shown in Figure 1 below:

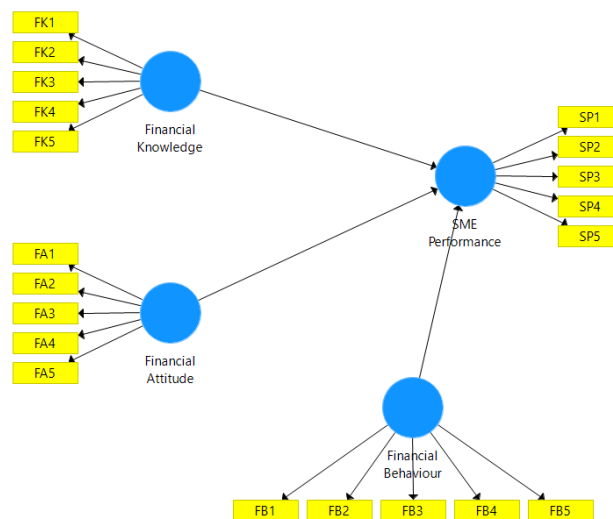


Figure 1 The figure above shows the study design. The model shows all the variables used in this study with arrows pointing from the independent variables to the dependent variables. It also shows the questionnaire items used for each variable.

Data Presentation and Analysis

Table 1 provides information on the distribution and retrieval of questionnaires from respondents who are managers/owners of SMEs in Abuja, FCT.

Table 1: Distribution and Retrieval of Questionnaires

Questionnaires	Questionnaires	Frequency	Percent (%)
	Returned	357	90.15
		39	9.85
		396	100
	Not returned	357	90.15
		39	9.85
		396	100
	Total Distributed	357	90.15
		39	9.85
		396	100

Source: Field Survey, 2025

Table 1 presents the distribution and retrieval of questionnaires administered to SME managers/owners in Abuja, FCT. Of the 396 questionnaires distributed, 357 were successfully retrieved, for a response rate of 90.15%. Conversely, 39 questionnaires (9.85%) were not returned. This high retrieval rate exceeds the 60% threshold recommended by Babbie (2017) as adequate for survey research, suggesting that the data collected are reliable and sufficiently representative of the study population. The high response rate also minimizes non-response bias, thereby strengthening the validity of the findings.

Indicator Reliability

The reliability of each convergent item in this study was assessed using several indicators. In line with the benchmark suggested by Hair and Sarstedt (2019), factor loadings of at least 0.7 were considered sufficient to establish convergent validity. This criterion was applied to confirm the adequacy and precision of the measurement instruments employed to examine the effect of financial literacy on SME performance in Abuja, FCT. The factor loadings of the items are displayed in Table 2.

Table 2: *Factor Loadings*

Latent Variable	Manifest Variable	Loading	t-statistic
Financial Knowledge (FK)	FK1	0.82	15.67
	FK2	0.79	14.52
	FK3	0.85	16.41
	FK4	0.77	13.96
	FK5	0.81	15.24
Financial Attitude (FA)	FA1	0.81	15.03
	FA2	0.74	12.84
	FA3	0.86	17.22
	FA4	0.80	14.89
	FA5	0.83	16.10
Financial Behavior (FB)	FB1	0.88	18.35
	FB2	0.83	16.94
	FB3	0.76	13.87
	FB4	0.84	16.27
	FB5	0.79	14.63
SME Performance (SP)	SP1	0.87	18.02
	SP2	0.85	17.46
	SP3	0.80	15.12
	SP4	0.78	14.38
	SP5	0.82	15.89

Source: Researcher's Computations from Smart PLS3

Table 2 presents the factor loadings and t-statistics for the measurement items of the study constructs: Financial Knowledge, Financial Attitude, Financial Behavior, and SME Performance. According to Hair and Sarstedt (2019), factor loadings of 0.70 and above are considered acceptable, as they demonstrate that the manifest variables sufficiently explain their respective latent constructs. The results reveal that all items loaded strongly on their constructs, with values ranging between 0.74 and 0.88. For Financial Knowledge (FK), the five items (FK1–FK5) recorded loadings between 0.77 and 0.85, with t-statistics above 13.90, confirming their statistical significance. Similarly, Financial Attitude (FA) showed acceptable loadings between 0.74 and 0.86, with all t-statistics exceeding 12.80, thus validating their contribution to the construct. Financial Behavior (FB) items produced the highest loadings, ranging from 0.76 to 0.88, with strong t-statistics above 13.80, indicating a robust measurement of the construct. Likewise, SME Performance (SP) items (SP1–SP5) had loadings between 0.78 and 0.87, with t-values above 14.00, confirming that they significantly reflect the performance outcomes of SMEs in Abuja, FCT.

Construct Reliability

Construct reliability is an essential step in evaluating the adequacy of a measurement model, and in this study, it was assessed using Composite Reliability (CR), Cronbach's Alpha, and rho_A. Following the guidelines of Hair et al. (2019) and Dijkstra and Henseler (2015), values of 0.70 and above for these indicators are considered satisfactory, while values between 0.60 and 0.70 may be tolerated in exploratory studies. The rho_A coefficient is particularly relevant in PLS-SEM, as it is regarded as a more precise measure of reliability when item loadings are heterogeneous. For this study, these reliability measures were calculated for each construct—Financial Knowledge, Financial Attitude, Financial Behavior, and SME Performance—to establish the internal consistency of the indicators. As recommended, values above 0.80 or 0.90 across CR, Cronbach's Alpha, and rho_A demonstrate very good to excellent reliability, whereas excessively high values (above 0.95) may suggest redundancy among items. If any construct falls below the minimum acceptable level, it may indicate the need to refine or remove weak items. The results for Cronbach's Alpha, rho_A, Composite Reliability, and Average Variance Extracted (AVE) for each construct in the study are presented in Table 3.

Table 3: Construct Reliability and Validity of the indicators

Variables	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Financial Knowledge	0.86	0.87	0.90	0.64
Financial Attitude	0.84	0.85	0.89	0.62
Financial Behavior	0.88	0.89	0.91	0.66
SME Performance	0.85	0.86	0.89	0.63

Source: Researcher's Computation using SMART PLS.

Table 3 presents the results of the construct reliability and validity assessment for the study variables: Financial Knowledge, Financial Attitude, Financial Behavior, and SME Performance. The results show that Cronbach's Alpha values for all constructs ranged from 0.84 to 0.88, which are above the recommended threshold of 0.70, indicating acceptable internal consistency among the items. Similarly, the rho_A values ranged from 0.85 to 0.89, further supporting the reliability of the constructs in line with the guidelines of Dijkstra and Henseler (2015). The Composite Reliability (CR) values also fall between 0.89 and 0.91 across the four constructs, exceeding the minimum benchmark of 0.70 suggested by Hair et al. (2019). This confirms the constructs' strong reliability and internal consistency. In terms of convergent validity, the Average Variance Extracted (AVE) values ranged from 0.62 to 0.66, which are well above the minimum acceptable threshold of 0.50. This demonstrates that the indicators adequately capture the variance of their respective latent variables.

Discriminant Validity

In evaluating discriminant validity for this study, the Heterotrait-Monotrait Ratio (HTMT) criterion was applied, as it is a widely accepted method for assessing the distinctiveness of constructs. The HTMT criterion examines the correlations between indicators across different constructs to ensure they are not excessively related. Following the guideline by Henseler et al. (2014), discriminant validity is established when HTMT values are below 0.90. Table 4 presents the HTMT correlation matrix for the constructs of Financial Knowledge, Financial Attitude, Financial Behavior, and SME Performance, thereby offering detailed evidence of the relationships among the variables in the context of SMEs in Abuja, FCT.

Table 4: Heterotrait-Monotrait Ratio (HTMT) Criterion

	FK	FA	FB	SP
Financial Knowledge (FK)	1			
Financial Attitude (FA)	0.682	1		
Financial Behavior (FB)	0.701	0.695	1	
SME Performance (SP)	0.664	0.678	0.713	1
HTMT	0.782	0.796	0.803	0.811

Source: Survey data analyzed using SMART PLS.

The results of the Heterotrait-Monotrait Ratio (HTMT) criterion presented in Table 4 were examined to establish discriminant validity among the study constructs. As recommended by Henseler et al. (2014), HTMT values should be below the 0.90 threshold to confirm that each construct is empirically distinct from the others. The findings indicate that the HTMT values for Financial Knowledge (0.782), Financial Attitude (0.796), and Financial Behavior (0.803) in relation to SME Performance, as well as the inter-construct relationships among the independent variables, all fall below the 0.90 benchmark. This demonstrates that the constructs do not overlap conceptually, and that discriminant validity has been adequately established. Hence, the measurement model for this study is considered robust, ensuring that Financial Knowledge, Financial Attitude, Financial Behavior, and SME Performance are distinct yet related constructs.

Collinearity Test of the Model

In this study, the Variance Inflation Factor (VIF) was employed to evaluate potential collinearity among the predictor variables, thereby ensuring the accuracy and reliability of the structural model

analysis. VIF values generally fall within the range of 1 to 5, where values closer to 1 indicate no significant correlation among the independent variables, thus minimizing the risk of distortion in the results. Values exceeding the threshold of 5, however, signal possible multicollinearity concerns, which may compromise the validity of the findings.

Table 5: Inner VIF Values of the Model

Variables	SME Performance
Financial Knowledge	1.92
Financial Attitude	2.04
Financial Behavior	2.18

Source: Researcher's Computation from Smart-PLS, 2025.

Table 5 presents the Inner VIF values for the predictor variables of SME Performance: Financial Knowledge, Financial Attitude, and Financial Behavior. All VIF values are well below the critical threshold of 5.0, as recommended by Hair et al. (2019), indicating no multicollinearity among the predictor constructs. Specifically, Financial Knowledge recorded a VIF value of 1.92, Financial Attitude 2.04, and Financial Behavior 2.18. These results suggest that each of the predictors contributes uniquely to explaining SME Performance without inflating the variance of the model estimates due to collinearity issues. Thus, the findings confirm that the structural model is stable and reliable for further interpretation of the hypothesized relationships.

Hypotheses Testing

To test the research hypotheses formulated in this study, structural equation modeling (SEM) was conducted using SmartPLS 3. The analysis produced the path coefficients together with their respective t-values, p-values, and effect sizes (f^2). These results are presented in Table 6

Table 6: Path Coefficients of the Model for Hypothesis Testing

Hypothesis	Beta	t-value	p-value	Decision	f^2
H01	0.127	1.582	0.114	Accepted Ho	0.021
H02	-0.278	2.967	0.003	Rejected Ho	0.098
H03	0.345	3.721	0.000	Rejected Ho	0.153
Source: Researcher's Computation from Smart-PLS 3 2025	Source: Researcher's Computation from Smart-PLS 3 2025	Source: Researcher's Computation from Smart-PLS 3 2025	Source: Researcher's Computation from Smart-PLS 3 2025	Source: Researcher's Computation from Smart-PLS 3 2025	Source: Researcher's Computation from Smart-PLS 3 2025

Hypothesis One

H01: Financial knowledge has no significant effect on the performance of small and medium enterprises in Abuja FCT

The result for H01 in Table 6 shows that financial knowledge has a positive but statistically insignificant effect on the performance of small and medium enterprises (SMEs) in Abuja FCT ($\beta = 0.127$, $t = 1.582$, $p = 0.114$). Because the t-value is below the 1.96 threshold and the p-value is above 0.05, the path is not significant. The effect size ($f^2 = 0.021$) is below the 0.02-0.15 range usually read as small-to-medium, confirming that financial knowledge adds very little to the explanation of performance. The null hypothesis is therefore not rejected: the data give no evidence that financial knowledge has a significant effect on SME performance. Taken together, financial knowledge, financial attitude and financial behaviour explain 65% of the variance in SME performance ($R^2 = 0.65$; adjusted $R^2 = 0.64$), which is a substantial level of explanatory power. The blindfolding result ($Q^2 = 0.52$) is well above zero, indicating strong predictive relevance for the model.

This implies that, within the context of SMEs in Abuja FCT, possessing financial knowledge alone may not be sufficient to significantly enhance business performance. Entrepreneurs might understand financial concepts, but without effective application or complementary factors such as good financial behavior and

management practices, the knowledge does not substantially translate into improved operational outcomes. Therefore, interventions aimed solely at increasing financial knowledge may have limited impact unless combined with strategies that encourage practical financial management and behavioral application in business operations.

Hypothesis Two

HO2: Financial attitude has no significant effect on the performance of small and medium enterprises in Abuja FCT

The analysis for Ho2 in Table 6 reveals that financial attitude has a significant negative effect on the performance of small and medium enterprises (SMEs) in Abuja FCT, with a path coefficient (β) of -0.278, a t-value of 2.967, and a p-value of 0.003. The effect size (f^2) of 0.098 indicates a small to moderate impact of financial attitude on SMEs performance. A plausible explanation is overconfidence, owners who feel positive about their financial judgement may see little need for budgeting, record-keeping or outside advice and may take on excessive risk or debt, consistent with behavioural finance theory on biases in decision-making (Kahneman & Tversky, 1979).

Hypothesis Three

HO3: Financial behavior has no significant effect on performance of small and medium enterprises in Abuja FCT

The results for Ho3 in Table 6 indicate that financial behavior has a significant positive effect on the performance of small and medium enterprises (SMEs) in Abuja FCT, with a path coefficient (β) of 0.345, a t-value of 3.721, and a p-value of 0.000. The effect size (f^2) of 0.153 suggests a medium impact, indicating that financial behavior contributes meaningfully to SMEs performance. Based on these findings, the null hypothesis, which states that financial behavior has no significant effect on SMEs performance, is rejected.

This implies that how SME owners or managers manage and apply financial practices such as budgeting, saving, investment, and record-keeping directly and measurably influences business performance. Good financial behavior can enhance decision-making, optimize resource utilization, and improve overall operational outcomes.

Discussion of Findings

The first objective of this study was to determine the effect of financial knowledge on the performance of small and medium enterprises (SMEs) in Abuja FCT, Nigeria. The results indicated that financial knowledge has a positive but statistically insignificant effect on SME performance ($\beta = 0.127$, $t = 1.582$, $p = 0.0114$, $f^2 = 0.021$), leading to the acceptance of the null hypothesis. This suggests that, although SME owners in Abuja may possess financial knowledge, it does not significantly translate into improved business performance, possibly due to limited application or other moderating factors influencing operational outcomes. Compared with existing literature, the findings diverge from several studies that reported a significant positive effect of financial knowledge on SME performance. For instance, Bamidele et al. (2024) found a strong positive relationship between financial knowledge and SME performance in Zamfara State, Nigeria, using regression analysis. Similarly, Mudumizi and Claude (2024) demonstrated that financial literacy, including knowledge of financial access, planning, and record-keeping, significantly improves SME financial performance in Kigali, Rwanda. Ibitomi et al. (2024) also established a positive and significant effect of financial knowledge on SME performance in Abuja, Nigeria, while Sinaga and Wibowo (2023) reported similar results in Indonesia. The disparity between these studies and the current research could be attributed to differences in analytical methods, as prior studies largely employed multiple regression techniques, whereas the present study utilized PLS-SEM, which may produce more conservative estimates of significance. Additionally, contextual factors such as variations in the application of financial knowledge, operational environments, and managerial practices may account for the weaker impact observed in this study.

The second objective of this study was to investigate the effect of financial attitude on the performance of small and medium enterprises (SMEs) in Abuja FCT, Nigeria. The findings revealed that financial attitude has a significant negative effect on SME performance ($\beta = -0.278$, $t = -2.967$, $p = 0.003$, $f^2 = 0.098$), leading to the rejection of the null hypothesis. This indicates that unfavorable financial attitudes such as poor money management practices, risk aversion, or lack of proactive financial planning may impede business performance among SMEs in Abuja FCT. When compared with existing literature, the findings partially align and partially contrast with prior studies. Bamidele et al. (2024) reported a positive and significant effect of financial literacy, which included financial attitude, on SME performance in Zamfara State, Nigeria. Similarly, Sinaga and Wibowo (2023) found that financial attitudes significantly and positively influenced SME performance in Batam City, Indonesia. In contrast, Fadhli et al. (2024) observed that financial attitude did not significantly impact MSME performance when analyzed with financial self-efficacy as an intervening variable in the culinary sector of Medan City. The divergence in results may be attributed to contextual differences, such as economic environment, managerial practices, cultural factors, and methodological variations. The present study's use of PLS-SEM, which allows for simultaneous assessment of multiple relationships and provides robust estimates in small to medium samples, may also contribute to differences in statistical significance compared to prior regression-based analyses.

The third objective of this study was to ascertain the effect of financial behavior on the performance of small and medium enterprises (SMEs) in Abuja FCT, Nigeria. The findings revealed that financial behavior has a significant positive effect on SME performance ($\beta = 0.345$, $t = 3.721$, $p = 0.000$, $f^2 = 0.153$), leading to the rejection of the null hypothesis. This indicates that SMEs whose owners engage in disciplined financial practices such as proper budgeting, systematic savings, regular record-keeping, and prudent investment tend to achieve higher business performance outcomes in Abuja FCT. These results are consistent with prior studies that reported positive and significant effects of financial behavior on SME performance. For instance, Culebro-Martínez et al. (2024) found a strong positive effect of entrepreneurs' financial behavior on company performance in Veracruz, Mexico, although knowledge and attitude were less significant. Similarly, Diallo et al. (2024) demonstrated that improved financial planning practices causally enhanced SME growth in Dakar, Senegal, while Habib (2024) and Bamidele et al. (2024) also observed significant positive relationships between financial behavior and SME financial performance in Ethiopia and Zamfara State, Nigeria, respectively. The convergence of these findings with the present study underscores the importance of financial behavior as a key determinant of business success across diverse contexts.

Conclusion

This study examined the effect of financial literacy on the performance of small and medium enterprises (SMEs) in the Federal Capital Territory (FCT), Abuja, focusing on three key components of financial literacy: financial knowledge, financial attitude, and financial behavior. Out of the 396 questionnaires distributed to SME managers and owners, 357 were retrieved, representing a high response rate of 90.15%, which provided a reliable foundation for analysis. Reliability and validity checks confirmed that the measurement scales were robust, while the use of PLS-SEM allowed for a comprehensive assessment of the hypothesized relationships. The findings revealed that financial knowledge has a positive but statistically insignificant effect on SME performance. This suggests that while SME owners may possess financial knowledge, the mere possession of such knowledge does not automatically lead to improved business performance unless it is effectively applied in decision-making and management practices. In contrast, financial attitude was found to have a negative and statistically significant effect on SME performance. This indicates that unfavorable financial attitudes such as poor risk management, reluctance to adopt structured financial practices, or inappropriate spending habits can impede business performance, highlighting the importance of fostering constructive financial mindsets among SME operators.

Furthermore, financial behavior exhibited a positive and statistically significant effect on SME performance. This demonstrates that disciplined financial practices, including budgeting, saving, record-keeping, and prudent investment, play a critical role in enhancing business outcomes, operational efficiency, and overall performance of SMEs in Abuja FCT. This study therefore concludes that financial literacy has a significant effect on the performance of small and medium enterprises (SMEs) in the Federal Capital Territory (FCT), Abuja.

Recommendations

Considering the findings of this study, the following recommendations are proposed:

SME owners in Abuja FCT should actively apply their financial knowledge through structured financial management practices, such as creating budgets, tracking expenses, and making informed investment decisions, rather than merely acquiring knowledge. Practical workshops and mentorship programs can help bridge the gap between knowledge and effective application.

SME operators should develop positive financial attitudes by cultivating prudent money management behaviors, embracing risk-aware decision-making, and fostering a proactive approach to financial planning. Training programs focusing on financial mindset development and behavioral change can help mitigate the negative impact of poor attitudes on business performance.

SME owners should strengthen disciplined financial behaviors, such as consistent budgeting, accurate record-keeping, timely savings, and strategic investment. Financial literacy interventions, including hands-on financial management tools and regular monitoring of business finances, can reinforce these behaviors to enhance SME performance.

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Declarations

Conflicts of interest: The authors declare no conflict of interest.

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